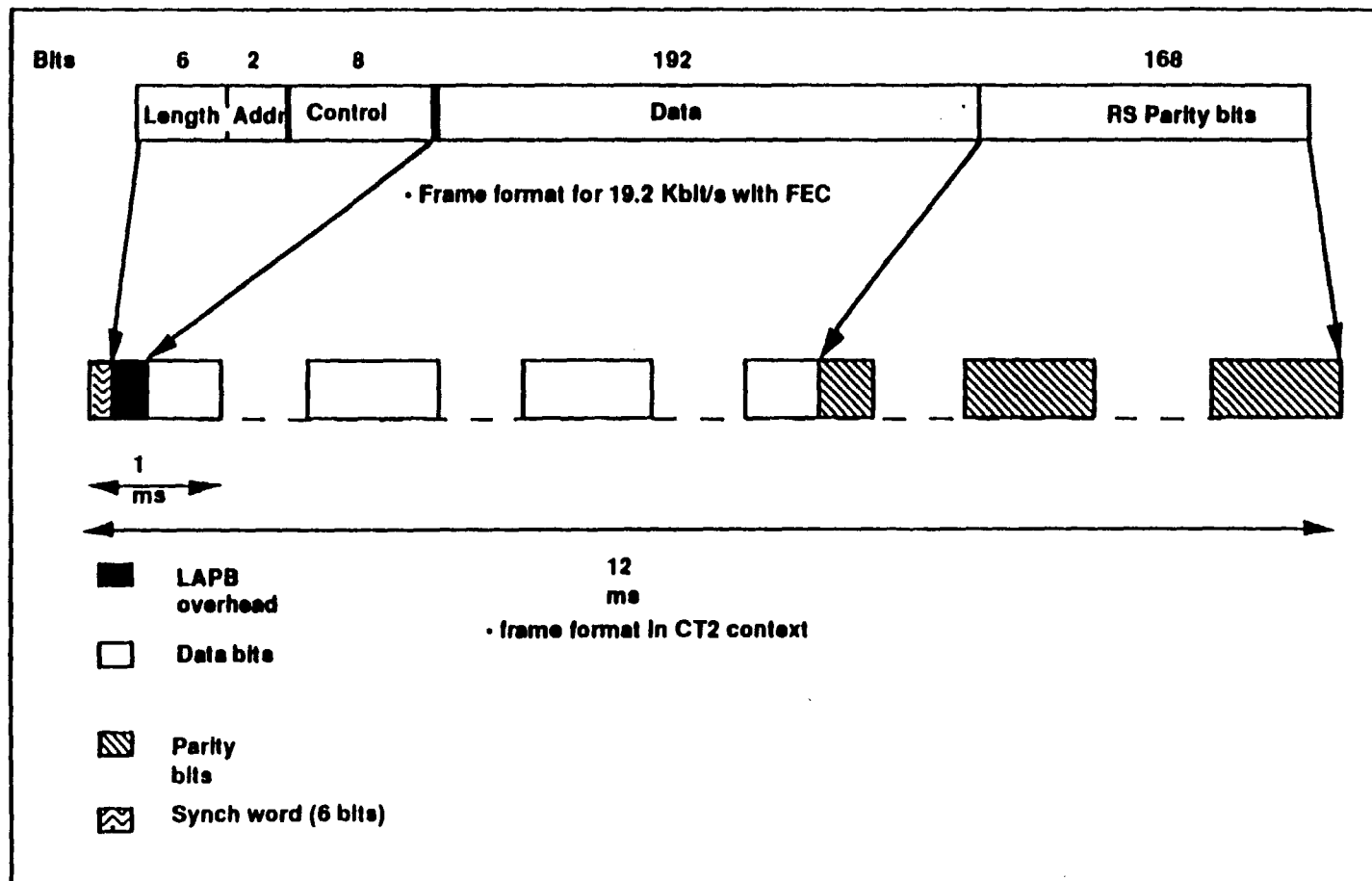


# PCI Data Packet Structure



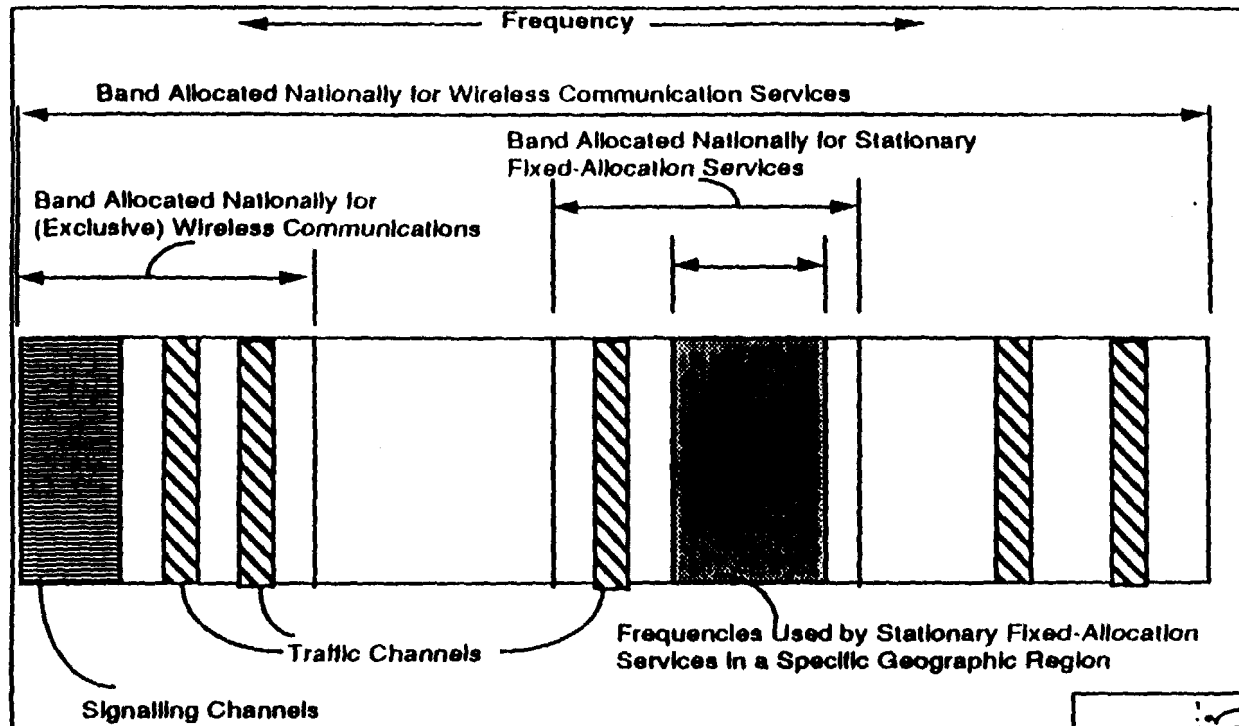
The modified LAPB frame is aligned with the Multiplex 1 burst structure.  
Multiplex 1 supports 64 B channel bits.  
Six bursts are used to carry a complete LAPB frame plus the FEC parity bits.

## Battery life enhanced by:

- low radio power (10 mW)
- signalling channels allowing fast reception of messages (no scanning of entire bands in stand-by mode)
- simple speech coding

$$\text{PORTABILITY} = \text{Talk Time} / \text{Weight}$$

# PCI Shared-Spectrum Operation



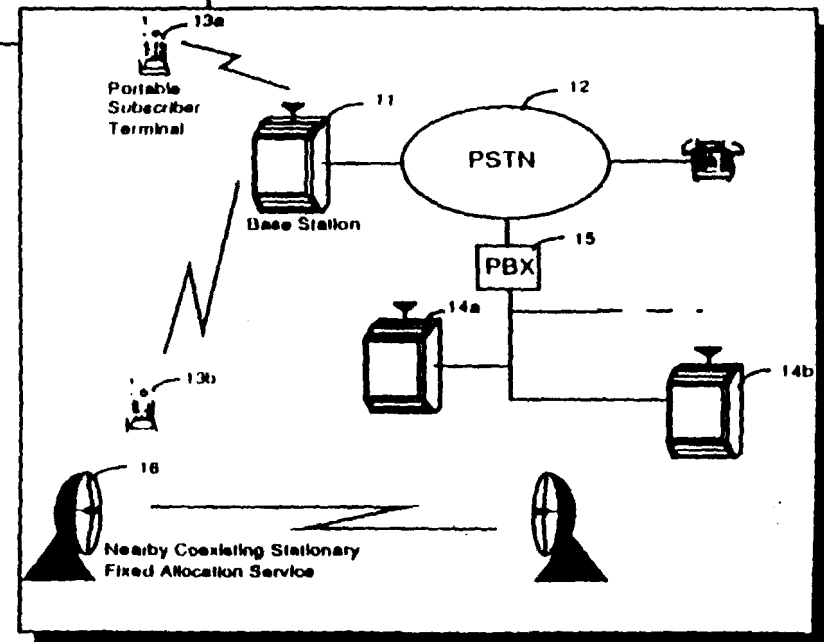
Control channels facilitate traffic channel assignments locally

Primary bands 930-931 MHz and 941-941 MHz providing 18 (100 KHz) channels used for control and traffic

Sharing adjacent bands 930-960 MHz

Share with fixed on a non-interference geographic basis (the terminal is under control of base station, as for cellular)

Base stations have knowledge of local channel availability (postal codes may be used as coordination zones)



PCI is an open industry standard

## **PCI is a North-American standard**

- equipment fully operational in both US and Canada
- PCI is an enhancement of CT2Plus proposal for Canada  
(channel management facilities to allow operation in available US spectrum)
- suggested Canadian spectrum 944-952 MHz is within US range 930-960 MHz

## **PCI is compatible with basic CT2 CAI equipment (save spectrum band)**

- CT2Plus and PCI are enhancements of CT2 CAI
- operation defaults to CT2 CAI if either base station or portable are not PCI

## **PCI is being considered for enhancing CT2 standards in Europe and Asia**

PCI is supported by a large number of suppliers

PCI offers large volume markets

# Advantages of PCI

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Open, evolutionary standard

Simple and inexpensive

Available now

Fits available US spectrum

- high spectrum efficiency
- can operate in narrow disjoint bands
- can share spectrum with fixed services adaptively

Large supply & demand base

- number of manufacturers
- economies of scale

Comprehensive applications

- work-place
- residential
- public
- district access

Meets foreseeable user needs

**PCI is unique in offering the opportunity of immediate  
North American Personal Communication Services**